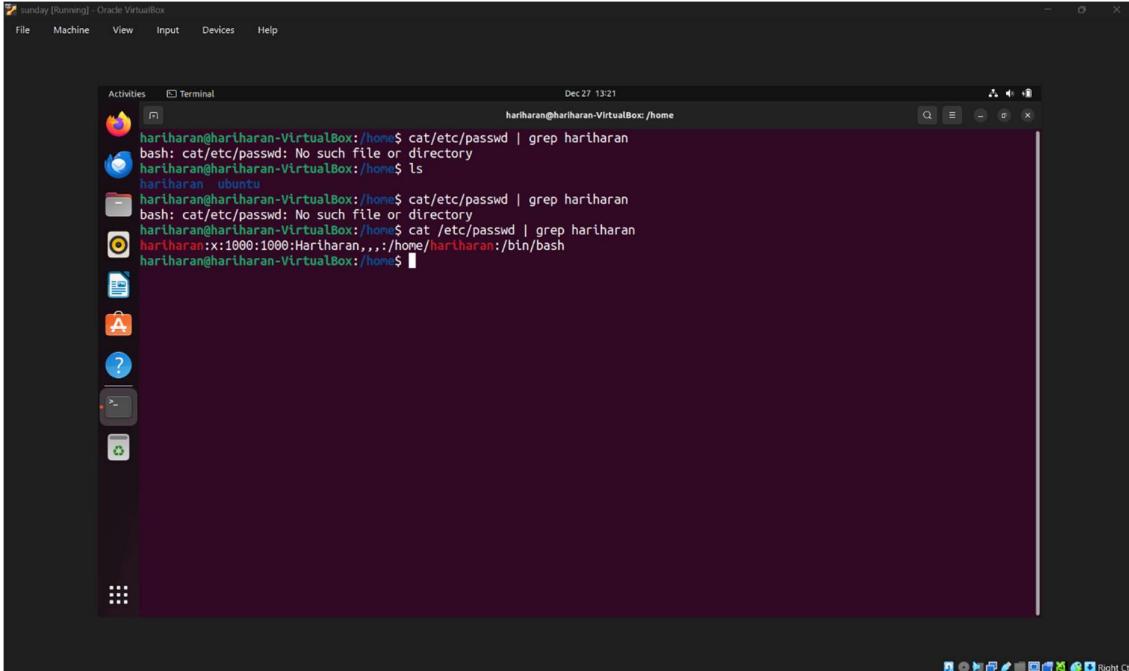


# LINUX ADMINISTRATOR COMMANDS AND FILE PERMISSION COMMANDS

- Using “Cat/etc/passwd | grep” command to identify the single user.



A screenshot of a Linux desktop environment, likely Ubuntu, running in Oracle VM VirtualBox. The desktop has a dark theme with a dock on the left containing icons for Activities, Dash, Home, and Help. A terminal window is open in the center, showing the command line interface. The terminal window title is "Terminal" and the status bar shows "Dec 27 13:21". The terminal content is as follows:

```
hariharan@hariharan-VirtualBox:~$ cat/etc/passwd | grep hariharan
bash: cat/etc/passwd: No such file or directory
hariharan@hariharan-VirtualBox:~$ ls
hariharan  ubuntu
hariharan@hariharan-VirtualBox:~$ cat/etc/passwd | grep hariharan
bash: cat/etc/passwd: No such file or directory
hariharan@hariharan-VirtualBox:~$ cat /etc/passwd | grep hariharan
hariharan:x:1000:1000:Hariharan,,,:/home/hariharan:/bin/bash
hariharan@hariharan-VirtualBox:~$
```

- Using “Cat/etc/passwd to identify the all user.

```

hariharan@hariharan-VirtualBox:~$ cat /etc/passwd | grep hariharan
hariharan:x:1000:1000:Hariharan,,,:/home/hariharan:/bin/bash
hariharan@hariharan-VirtualBox:~$ cat /etc/passwd
root:x:0:0:root:/root:/bin/bash
daemon:x:1:daemon:/usr/sbin:/sbin/nologin
bin:x:2:bin:/bin:/sbin/nologin
sys:x:3:sys:/dev:/sbin/nologin
sync:x:4:65534:sync:/bin:/sync
games:x:5:60:games:/usr/games:/sbin/nologin
man:x:6:12:man:/var/cache/man:/sbin/nologin
lp:x:7:lp:/var/spool/lpd:/sbin/nologin
mail:x:8:8:mail:/var/mail:/sbin/nologin
news:x:9:9:news:/var/spool/news:/sbin/nologin
uucp:x:10:10:uucp:/var/spool/uucp:/sbin/nologin
proxy:x:13:13:proxy:/bin:/sbin/nologin
www-data:x:33:33:www-data:/var/www:/sbin/nologin
backup:x:34:34:backup:/var/backups:/sbin/nologin
list:x:38:Mailing List Manager:/var/list:/sbin/nologin
trc:x:39:39:trc:/run/trcd:/sbin/nologin
gnats:x:41:41:Gnats Bug-Reporting System (admin):/var/lib/gnats:/sbin/nologin
nobody:x:65534:65534:nobody:/nonexistent:/sbin/nologin
systemd-network:x:100:102:systemd Network Management,,,:/run/systemd:/sbin/nologin
systemd-resolve:x:101:103:systemd Resolver,,,:/run/systemd:/sbin/nologin
messagemedia:x:102:105::/nonexistent:/sbin/nologin
systemd-timesync:x:103:106:system Time Synchronization,,,:/run/systemd:/sbin/nologin
syslog:x:104:111:/home/syslog:/sbin/nologin
apt:x:105:65534::/nonexistent:/sbin/nologin
tss:x:106:113:TPM software stack,,,:/var/lib/tpm:/bin/false
uudd:x:107:16::/run/uudd:/sbin/nologin
systemd-oom-killer:x:108:17:systemd Userspace OOM Killer,,,:/run/systemd:/sbin/nologin
tcpdump:x:109:118::/nonexistent:/sbin/nologin
autoipd:x:110:119:Avahi autoip daemon,,,:/var/lib/avahi-autoipd:/sbin/nologin
usbmuxd:x:111:46:usbmux daemon,,,:/var/lib/usbmux:/sbin/nologin
dnsmasq:x:112:65534:dnsmasq,,,:/var/lib/ntsc:/sbin/nologin
kerneld:x:113:65534:KernelOops Tracking Daemon,,,:/sbin/nologin
avahi:x:114:121:Avahi mDNS daemon,,,:/run/avahi-daemon:/sbin/nologin
cups-pk-helper:x:115:122:user for cups-pk-helper service,,,:/home/cups-pk-helper:/sbin/nologin
realtimekit:x:116:123::/proc:/sbin/nologin
whoppp:x:117:124::/nonexistent:/bin/false
speech-dispatcher:x:118:125:sssd system user,,,:/var/lib/sssd:/sbin/nologin
fwupd-refresh:x:119:29:Speech Dispatcher,,,:/run/speech-dispatcher:/bin/false
openvpn:x:121:127:NetworkManager OpenVPN,,,:/var/lib/openvpn/chroot:/sbin/nologin
saned:x:122:129::/var/lib/saned:/sbin/nologin
color-management:x:123:130:color management daemon,,,:/var/lib/colord:/sbin/nologin
geoip:x:124:131::/var/lib/geoip:/sbin/nologin
pulse:x:125:132:pulseaudio daemon,,,:/run/pulse:/usr/sbin/nologin
gnome-initial-setup:x:126:65534::/run/gnome-initial-setup/:/bin/false
hpclip:x:127:7:HPPLIP system user,,,:/run/hpclip:/bin/false
gdm:x:128:134:GNOME Display Manager:/var/lib/gdm:/bin/false
hariharan:x:1000:1000:Hariharan,,,:/home/hariharan:/bin/bash
hariharan@hariharan-VirtualBox:~$ 
```

- Using “Passwd” command to create or update password.

```

hariharan@hariharan-VirtualBox:~$ passwd hariharan
Changing password for hariharan.
Current password:
New password:
Retype new password:
passwd: password updated successfully
hariharan@hariharan-VirtualBox:~$ 
```

- Using “Cat/etc/group | grep” command to create a group of developer.

```

sunday [Running] - Oracle VirtualBox
File Machine View Input Devices Help

Activities Terminal Dec 27 13:48
hariharan@hariharan-VirtualBox:/home$ cat /etc/group | grep jarvis
hariharan@hariharan-VirtualBox:/home$ cat /etc/group | grep jarvis
hariharan@hariharan-VirtualBox:/home$ cat /etc/group | grep jarvis
hariharan@hariharan-VirtualBox:/home$ cat /etc/group | grep users
x:100:
hariharan@hariharan-VirtualBox:/home$ cat /etc/group | grep hariharan
x:4:syslog,hariharan
x:24:hariharan
stut:27:hariharan
di:30:hariharan
p:46:v:x:46:hariharan
lpx:122:hariharan
lx:135:hariharan
hariharan:x:1000:
sambashare:x:136:hariharan
hariharan@hariharan-VirtualBox:/home$ cat /etc/group | grep hari
x:4:syslog,hariharan
x:24:hariharan
stut:27:hariharan
di:30:hariharan
p:46:v:x:46:hariharan
lpx:122:hariharan
lx:135:hariharan
hariharan:x:1000:
sambashare:x:136:hariharan
hariharan@hariharan-VirtualBox:/home$ cat /etc/os-release
cat: /etc/: Is a directory
cat: os-release: No such file or directory
hariharan@hariharan-VirtualBox:/home$ cat /etc/group | grep users
x:100:
hariharan@hariharan-VirtualBox:/home$
```

- Using “Cat/etc/os-release” command to os specs.

```

sunday [Running] - Oracle VirtualBox
File Machine View Input Devices Help

Activities Terminal Dec 27 13:53
hariharan@hariharan-VirtualBox:/home$ cat /etc/group | grep hari
x:1000:
sambashare:x:136:hariharan
hariharan@hariharan-VirtualBox:/home$ cat /etc/group | grep hari
x:4:syslog,hariharan
x:24:hariharan
stut:27:hariharan
di:30:hariharan
p:46:v:x:46:hariharan
lpx:122:hariharan
lx:135:hariharan
hariharan:x:1000:
sambashare:x:136:hariharan
hariharan@hariharan-VirtualBox:/home$ cat /etc/os-release
cat: /etc/: Is a directory
cat: os-release: No such file or directory
hariharan@hariharan-VirtualBox:/home$ cat /etc/group | grep users
x:100:
hariharan@hariharan-VirtualBox:/home$ cat /etc/os-release
PRETTY_NAME="Ubuntu 22.04.5 LTS"
NAME="Ubuntu"
VERSION_ID="22.04"
VERSION="22.04.5 LTS (Jammy Jellyfish)"
VERSION_CODENAME=jammy
ID=ubuntu
ID_LIKE=debian
HOME_URL="https://www.ubuntu.com/"
SUPPORT_URL="https://help.ubuntu.com/"
BUG_REPORT_URL="https://bugs.launchpad.net/ubuntu/"
PRIVACY_POLICY_URL="https://www.ubuntu.com/legal/terms-and-policies/privacy-policy"
UBUNTU_CODENAME=jammy
hariharan@hariharan-VirtualBox:/home$
```

- Using “chmod ug+rwx file2” command and “ls -l” command to use read and write of an user and group of file 2.

```

sunday [Running] - Oracle VirtualBox
File Machine View Input Devices Help
Activities Terminal Dec 27 14:06
hariharan@hariharan-VirtualBox: ~/hariharan

drwxr-xr-x 2 hariharan hariharan 4096 Dec 27 11:42 Templates
drwxr-xr-x 2 hariharan hariharan 4096 Dec 27 11:42 Videos
---- 1 hariharan hariharan 12288 Dec 27 11:53 .videos.swp
hariharan@hariharan-VirtualBox: ~$ pwd
/hariharan
hariharan@hariharan-VirtualBox: ~$ cd home
hariharan@hariharan-VirtualBox: ~$ cd: No such file or directory
hariharan@hariharan-VirtualBox: ~$ mkdir hariharan
hariharan@hariharan-VirtualBox: ~$ mv file1 hariharan
hariharan@hariharan-VirtualBox: ~$ ls
Downloads file3 file.txt hariharan Pictures snap Videos
Documents file2 file4 file.txt.save Music Public Templates
hariharan@hariharan-VirtualBox: ~$ mv file2 hariharan
hariharan@hariharan-VirtualBox: ~$ ls
Downloads file3 file4 file.txt file.txt.save hariharan Music Pictures Public snap Templates Videos
hariharan@hariharan-VirtualBox: ~$ mv file3 file4 hariharan
hariharan@hariharan-VirtualBox: ~$ ls
file2 file3 file4
hariharan@hariharan-VirtualBox: ~$ ls -l
total 0
-rw-rw-rwx 1 hariharan hariharan 0 Dec 27 13:56 file1
-rw-rw-r-- 1 hariharan hariharan 0 Dec 27 13:56 file2
-rw-rw-r-- 1 hariharan hariharan 0 Dec 27 13:56 file3
-rw-rw-r-- 1 hariharan hariharan 0 Dec 27 13:56 file4
hariharan@hariharan-VirtualBox: ~$ chmod ug+rw file2
hariharan@hariharan-VirtualBox: ~$ ls
file2 file3 file4
hariharan@hariharan-VirtualBox: ~$ Show Applications n-VirtualBox: ~/hariharan$ 

```

- Using “chmod u-r file2” and “ls -l” command to permission denied of user,groups and others.

```

sunday [Running] - Oracle VirtualBox
File Machine View Input Devices Help
Activities Terminal Dec 27 14:07
hariharan@hariharan-VirtualBox: ~/hariharan

hariharan@hariharan-VirtualBox: ~$ ls
Downloads file3 file.txt hariharan Pictures snap Videos
Documents file2 file4 file.txt.save Music Public Templates
hariharan@hariharan-VirtualBox: ~$ mv file2 hariharan
hariharan@hariharan-VirtualBox: ~$ ls
Downloads file3 file4 file.txt file.txt.save hariharan Music Pictures Public snap Templates Videos
hariharan@hariharan-VirtualBox: ~$ mv file3 file4 hariharan
hariharan@hariharan-VirtualBox: ~$ ls
file2 file3 file4
hariharan@hariharan-VirtualBox: ~$ ls -l
total 0
-rw-rw-rwx 1 hariharan hariharan 0 Dec 27 13:56 file1
-rw-rw-r-- 1 hariharan hariharan 0 Dec 27 13:56 file2
-rw-rw-r-- 1 hariharan hariharan 0 Dec 27 13:56 file3
-rw-rw-r-- 1 hariharan hariharan 0 Dec 27 13:56 file4
hariharan@hariharan-VirtualBox: ~$ chmod ug+rw file2
hariharan@hariharan-VirtualBox: ~$ ls
file2 file3 file4
hariharan@hariharan-VirtualBox: ~$ chmod u-r file2
hariharan@hariharan-VirtualBox: ~$ ls
file1 file2 file3 file4
hariharan@hariharan-VirtualBox: ~$ ls -l
total 0
-rw-rw-rwx 1 hariharan hariharan 0 Dec 27 13:56 file1
-rw-rw-r-- 1 hariharan hariharan 0 Dec 27 13:56 file2
-rw-rw-r-- 1 hariharan hariharan 0 Dec 27 13:56 file3
-rw-rw-r-- 1 hariharan hariharan 0 Dec 27 13:56 file4
hariharan@hariharan-VirtualBox: ~$ 

```

- Using “chmod 777 file1 file2 file3 file4” command and “ls -l” command to read,write and execute of an user,group and others.

```

sunday [Running] - Oracle VirtualBox
File Machine View Input Devices Help

Activities Terminal Dec 27 14:10
hariharan@hariharan-VirtualBox:~/hariharan

-rw-r--r-- 1 hariharan hariharan 0 Dec 27 13:56 file2
-rw-r--r-- 1 hariharan hariharan 0 Dec 27 13:56 file3
-rw-r--r-- 1 hariharan hariharan 0 Dec 27 13:56 file4
hariharan@hariharan-VirtualBox:~/hariharan$ chmod ug+rw file2
hariharan@hariharan-VirtualBox:~/hariharan$ ls
file2 file3 file4
hariharan@hariharan-VirtualBox:~/hariharan$ chmod u-r file2
hariharan@hariharan-VirtualBox:~/hariharan$ ls
file2 file3 file4
hariharan@hariharan-VirtualBox:~/hariharan$ chmod ugo+777 file2
hariharan@hariharan-VirtualBox:~/hariharan$ chmod --help
hariharan@hariharan-VirtualBox:~/hariharan$ chmod 777 field1 field2 field3 field4
chmod: cannot access 'field1': No such file or directory
chmod: cannot access 'field2': No such file or directory
chmod: cannot access 'field3': No such file or directory
chmod: cannot access 'field4': No such file or directory
hariharan@hariharan-VirtualBox:~/hariharan$ chmod 777 file1 file2 file3 file4
hariharan@hariharan-VirtualBox:~/hariharan$ ls -l
total 0
-rwxrwxrwx 1 hariharan hariharan 0 Dec 27 13:56 file1
-rwxrwxrwx 1 hariharan hariharan 0 Dec 27 13:56 file2
-rwxrwxrwx 1 hariharan hariharan 0 Dec 27 13:56 file3
-rwxrwxrwx 1 hariharan hariharan 0 Dec 27 13:56 file4
hariharan@hariharan-VirtualBox:~/hariharan$ 

```

- Using “chmod 457 file1 file2 file3 file4” command and “ls -l” command to read, write and execute of an user, group and others.

```

sunday [Running] - Oracle VirtualBox
File Machine View Input Devices Help

Activities Terminal Dec 27 14:12
hariharan@hariharan-VirtualBox:~/hariharan

file2 file3 file4
hariharan@hariharan-VirtualBox:~/hariharan$ ls -l
total 0
-rwxrwxrwx 1 hariharan hariharan 0 Dec 27 13:56 file1
-rw-r--r-- 1 hariharan hariharan 0 Dec 27 13:56 file2
-rw-r--r-- 1 hariharan hariharan 0 Dec 27 13:56 file3
-rw-r--r-- 1 hariharan hariharan 0 Dec 27 13:56 file4
hariharan@hariharan-VirtualBox:~/hariharan$ chmod ugo+777 file2
chmod: invalid mode: 'ugo+777'
hariharan@hariharan-VirtualBox:~/hariharan$ chmod --help
hariharan@hariharan-VirtualBox:~/hariharan$ chmod 777 field1 field2 field3 field4
chmod: cannot access 'field1': No such file or directory
chmod: cannot access 'field2': No such file or directory
chmod: cannot access 'field3': No such file or directory
chmod: cannot access 'field4': No such file or directory
hariharan@hariharan-VirtualBox:~/hariharan$ chmod 777 file1 file2 file3 file4
hariharan@hariharan-VirtualBox:~/hariharan$ ls -l
total 0
-rwxrwxrwx 1 hariharan hariharan 0 Dec 27 13:56 file1
-rwxrwxrwx 1 hariharan hariharan 0 Dec 27 13:56 file2
-rwxrwxrwx 1 hariharan hariharan 0 Dec 27 13:56 file3
-rwxrwxrwx 1 hariharan hariharan 0 Dec 27 13:56 file4
hariharan@hariharan-VirtualBox:~/hariharan$ 

```

- Using “chmod 000 file1 file2 file3 file4” command and “ls -l” command to empty of an user, group and others.

sunday [Running] - Oracle VirtualBox

File Machine View Input Devices Help

Activities Terminal Dec 27 14:12

```
hariharan@hariharan-VirtualBox:~/hariharan$ chmod ugo+777 file2
chmod: invalid mode: 'ugo+777'
Try 'chmod --help' for more information.
hariharan@hariharan-VirtualBox:~/hariharan$ chmod 777 field1 field2 field3 field4
chmod: cannot access 'field1': No such file or directory
chmod: cannot access 'field2': No such file or directory
chmod: cannot access 'field3': No such file or directory
chmod: cannot access 'field4': No such file or directory
hariharan@hariharan-VirtualBox:~/hariharan$ chmod 777 file1 file2 file3 file4
hariharan@hariharan-VirtualBox:~/hariharan$ ls -l
total 0
-A  ixrwx 1 hariharan hariharan 0 Dec 27 13:56 file1
-A  ixrwx 1 hariharan hariharan 0 Dec 27 13:56 file2
-A  ixrwx 1 hariharan hariharan 0 Dec 27 13:56 file3
-A  ixrwx 1 hariharan hariharan 0 Dec 27 13:56 file4
hariharan@hariharan-VirtualBox:~/hariharan$ chmod 457 file1 file2 file3 file4
hariharan@hariharan-VirtualBox:~/hariharan$ ls -l
total 0
-xrwx 1 hariharan hariharan 0 Dec 27 13:56 file1
-xrwx 1 hariharan hariharan 0 Dec 27 13:56 file2
-xrwx 1 hariharan hariharan 0 Dec 27 13:56 file3
-tr-r  xrwx 1 hariharan hariharan 0 Dec 27 13:56 file4
hariharan@hariharan-VirtualBox:~/hariharan$ chmod 000 file1 file2 file3 file4
hariharan@hariharan-VirtualBox:~/hariharan$ ls -l
total 0
----- 1 hariharan hariharan 0 Dec 27 13:56 file1
----- 1 hariharan hariharan 0 Dec 27 13:56 file2
----- 1 hariharan hariharan 0 Dec 27 13:56 file3
----- 1 hariharan hariharan 0 Dec 27 13:56 file4
hariharan@hariharan-VirtualBox:~/hariharan$
```